

REMARKS/ARGUMENTS

This is in response to the Office Action dated August 6, 2008. Claims 1 and 4-25 are pending. Claims 1 and 4-21 stand rejected in the outstanding Office Action. Claims 22-24 are objected to. Claims 1, 4 and 22-24 have been amended. Claims 2-3 have been cancelled. New claim 25 has been added. Support for the new claim can be found, for example, in p. 30, lines 19-21 and Figs. 14-16 of the instant specification.

Applicant thanks the Examiner for consideration of the Information Disclosure Statement (IDS) filed July 12, 2006. The Examiner is respectfully requested to also consider the Information Disclosure Statement filed herein, corresponding to the IDS filed February 13, 2008.

The Examiner's acknowledgment of the application's claim to foreign priority is appreciated.

The rejection of independent claim 1 as allegedly being anticipated under 35 U.S.C. § 102(b) by Ohta et al. (US 6,266,116) is respectfully traversed. Ohta fails to disclose or even remotely suggest each and every limitation set forth in the claims. Anticipation requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference", *Verdegaal Bro. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (MPEP § 2131).

Amended claim 1 (incorporating the limitations of claims 2 and 3, which have been cancelled) now recites "polarization is present in the liquid crystal layer when no electric field is generated between the first and second electrodes, and in the liquid crystal layer, a component of an average polarization direction in a direction parallel to the substrates is orthogonal to the direction in which an electric field is to be generated, when no electric

field is generated between the first and second electrodes”. Ohta fails to teach or suggest this limitation.

Ohta discloses a liquid crystal display device comprising an array of pixels. Each pixel includes a pixel electrode PX and two counter electrodes CT in opposite sides of the pixel electrode PX (col. 9, lines 20-33, Fig. 1), thus dividing the area of the pixel into two regions. In one embodiment, the pixel electrode PX and the counter electrodes CT are straight lines (Fig. 11). Ohta teaches that a direction (EDR) of an applied electric field is defined as the direction of a component parallel with the surfaces of a liquid crystal layer between PX and CX of an applied electric field in a gap between PX and CX. In the case of line or stripe electrodes, the direction EDR is perpendicular to the extended directions of the electrodes PX and CX.

When no voltage is applied, then the liquid crystal molecules are free from twisting and they are oriented in a direction normal to the direction EDR of the electric field to be applied (col. 18, lines 50-55, col. 19, lines 3-8, Fig. 2C).

When a voltage is applied between the electrodes PX and CX, liquid crystal molecules of the liquid crystal layer are driven, the driving direction determined by the intersecting angle θ (see Fig. 12B). Because the angle θ has different polarity in the two regions, the liquid crystal molecules are rotated in opposite directions in the two adjacent regions of the same pixel (col. 22, lines 16-37, see also col. 19, lines 41-48, col. 20, lines 39-49).

Even though Ohta discloses that the liquid crystals molecules are arranged in a splay state when no voltage is applied, Ohta fails to teach or suggest that “polarization is present in the liquid crystal layer when no electric field is generated between the first and

second electrodes”, as required by the amended claim 1. The Examiner cited col. 18, line 63 to col. 18, line 2 regarding this limitation (see p. 3 of the Office Action of August 6, 2008). The cited section states:

FIGS. 2A to 2D are illustrations showing the directions of the applied electric field of the liquid crystal display device of the embodiment 1 of the present invention, the directions of polarized-light transmission axes (OD1 and OD2) of polarizing plates (POL1 and POL2), and driving directions of liquid crystal molecules (LC).

None of the above teaches a polarization present in the liquid crystal layer when there is no electric field applied between the first and second electrodes.

The principle for displaying images in the claimed LCD device is entirely different from than in Ohta.

In other words, the liquid crystal device of Ohta displays images by tilting a direction of an initial orientation of the liquid crystal molecules (the orientation direction when no voltage is applied) to the direction of electric field generated between electrodes to control a rotation direction of the liquid crystal molecules.

In contrast, the claimed device displays images by using the liquid crystal molecules generated when the no voltage is applied for controlling a rotation direction of the liquid crystal molecules. This principle is different from Ohta’s device’s principle of operation.

For the above reasons, claim 1 is allowable.

Claims 22-24 have been rewritten in independent form to include all the limitations of the base claim. Since said claims were indicated by the Examiner as being allowable over the prior art of record, it is respectfully submitted that claims 22-24 are allowable.

New claim 25 recites “at least part of the second electrodes overlaps with the signal

lines when viewed in the direction normal to surfaces of the substrates". Ohta fails to teach or suggest this feature. Hence, claim 25 is allowable.

It is respectfully requested that the rejection of claims 4-21, all dependent from claim 1, also be withdrawn.

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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